WHAT IS CLAIMED IS:

1. An irrigated electrode catheter comprising:

a catheter body having proximal and distal ends and a lumen extending therethrough;

a tip section having proximal and distal ends, the proximal end of the tip section being fixedly attached to the distal end of the catheter body;

a porous tip electrode fixedly attached to the distal end of the tip section, the tip electrode comprising a non-conductive porous material over which a conductive porous coating is disposed; and

an irrigation tube extending through the catheter body and into the porous tip electrode of the tip section, whereby fluid passing through the irrigation tube can pass through the non-conductive porous material and the conductive porous coating to reach surrounding tissue.

2. An irrigated electrode catheter according to claim 1, further comprising an electrode lead wire in electrical communication with the conductive porous coating.

3. An irrigated electrode catheter according to claim 1, wherein the non-conductive porous material is made from material selected from the group consisting of polyethylene, Teflon and ceramic.

4. An irrigated electrode catheter according to claim 1, wherein the non-conductive porous material comprises polyethylene.

5. An irrigated electrode catheter according to claim 1, wherein the conductive porous coating is made from material selected from the group consisting of platinum and gold.

6. An irrigated electrode catheter according to claim 1, wherein the conductive porous coating comprises an alloy of platinum and iridium.

7. An irrigated electrode catheter according to claim 6, wherein the alloy of platinum and iridium comprises 90% platinum and 10% iridium.

8. An irrigated electrode catheter according to claim 1, wherein fluid passes through channels between particles of the non-conductive porous material.

9. An irrigated electrode catheter according to claim 1, wherein fluid passes through channels of a webbing of the conductive porous coating.

10. An irrigated electrode catheter according to claim 1, further comprising a temperature sensing means mounted within the tip electrode.

11. An irrigated electrode catheter according to claim 1, further comprising an electromagnetic sensor mounted in the tip section.

12. An irrigated electrode catheter according to claim 1, wherein the non-conductive porous material comprises sintered polymer particles.

13. An irrigated electrode catheter according to claim 1, wherein the non-conductive porous material comprises sintered ceramic particles.

14. An irrigated electrode catheter according to claim 12, wherein the polymer particles comprises particles of polyethylene or Teflon.

15. An irrigated electrode catheter comprising:

a catheter body having an outer wall, proximal and distal ends, and a lumen extending therethrough;

a tip section comprising a segment of flexible tubing having proximal and distal ends and at least one lumen therethrough, the proximal end of the tip section being fixedly attached to the distal end of the catheter body;

a porous tip electrode fixedly attached to the distal end of the tubing of the tip section, the tip electrode having an outer surface and comprising a non-conductive porous material through which fluid can pass and a thin metal coating disposed over the outer surface of the porous tip electrode; and

an irrigation tube having proximal and distal ends extending through the central lumen in the catheter body, wherein the distal end of the irrigation tube is in fluid communication with the proximal end of the passage in the tip electrode, whereby fluid can pass through the irrigation tube, into the passage in the tip electrode and through the porous material of the tip electrode to the outer surface of the tip electrode.

16. An irrigated electrode catheter according to claim 15, further comprising an electrode lead wire in electrical communication with the conductive porous coating.

17. An irrigated electrode catheter according to claim 15, wherein the non-conductive porous material is made from material selected from the group consisting of polyethylene, Teflon and ceramic.

18. An irrigated electrode catheter according to claim 15, wherein the non-conductive porous material comprises polyethylene.

19. An irrigated electrode catheter according to claim 15, wherein the conductive porous coating is made from material selected from the group consisting of platinum and gold.

20. An irrigated electrode catheter according to claim 15, wherein the conductive porous coating comprises an alloy of platinum and iridium.

21. An irrigated electrode catheter according to claim 20, wherein the alloy of platinum and iridium comprises 90% platinum and 10% iridium.

22. An irrigated electrode catheter according to claim 15, wherein fluid passes through channels between particles of the non-conductive porous material.

23. An irrigated electrode catheter according to claim 15, wherein fluid passes through channels of a webbing of the conductive porous coating.

24. An irrigated electrode catheter according to claim 15, further comprising a temperature sensing means mounted within the tip electrode.

25. An irrigated electrode catheter according to claim 15, further comprising an electromagnetic sensor mounted in the tip section.

26. An irrigated electrode catheter according to claim 15, wherein the non-conductive porous material comprises sintered polymer particles.

27. An irrigated electrode catheter according to claim 15, wherein the non-conductive porous material comprises sintered ceramic particles.

28. An irrigated electrode catheter according to claim 26, wherein the polymer particles comprises particles of polyethylene or Teflon.